Objectives

•~~Move the conversation forward toward d~~Develop~~ing~~ a common vision for evaluating the stormwater pathway

•Ensure ~~LWG will have~~ stormwater data of sufficient quantity and quality will be collected to complete the in-water RI/FS

•Investigate use of Fate and Transport model as a tool for evaluating stormwater impacts at various scales

•~~Improve u~~Understand~~ing of~~ the relative importance of ~~extent to which~~ stormwater ~~is part of the "problem"~~compared to other sources

•Guide development of workplans to collect necessary stormwater data

•Create a mechanism for relating RI data to source control efforts

Considerations

•Little information currently available about the load of COIs entering Portland Harbor via stormwater

•Lack of empirical data on how stormwater discharges affect water column and sediment concentrations in PH

•Remedial Objectives not established yet; don't have a target to shoot for

•Variable nature of stormwater makes it challenging to characterize adequately

•The more significant stormwater is as a source, the more data will be needed to provide confidence for decision-making

Initial Modeling Objectives

•Learn more about how the Fate and Transport model works and what it can do for us

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•Get very rough sense of relative impact of stormwater on PH water and sediments

- Explore the spatial and temporal variability of stormwater impacts

•Use info to help shape next steps, such as:

  –What model runs do we want to do next?
  –What data gaps do we need to fill?
  –What are our data quality objectives?

Stormwater Modeling

Data sources for initial model runs:

•Use City's Grid model to estimate volume of runoff from ISA

Commented [DLS1]: We have yet to define who will collect what information – it may be that LWG needs to collect some info as well.

Commented [DLS2]: Not sure what this means - clarify

Commented [DLS3]: Insn't another major consideration is how to evaluate the impact of stormwater (the black box) on water column and sediment quality. The F&T model is proposed to be used to evaluate this but need to determine whether it is the appropriate tool and at what scale.

Commented [DLS4]: Do you really mean empirical data on inriver effects? If we're looking at harborwide, the empirical data we need is stormwater itself – the bullet would then read "Lack of empirical data on stormwater quality and quantity to evaluate its effects on water column and sediment concentrations". Or are you suggesting that we need inriver empirical data?

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Commented [DLS5]: Wasn't the initial intitial run really to use City's flow data and back-calculate the concentrations needed in stormwater to have a harborwide effect? Then compare those concentrations to existing and literature data to understand whether stormwater could be a significant contributor. For example, if concentrations are 4 orders of magnitude greater than what has ever been measured, then we might switch to a smaller scale (e.g., AOPC) to ask whether stormwater is more important at the AOPC level.

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•Use existing stormwater data to ballpark range of COI concentrations in stormwater, or use literature values

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Concentration x Volume = Loading

What questions could we ask?

•What concentration of a COI in stormwater would it take to recontaminate sediment in 5/10/50 years?

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•How long would it take to recontaminate sediment if we assumed a "typical" concentration?

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•What concentration does it take to cause a "signal" in fish? [Link F&T model to Food Web model]

What do we hope to find out?

By integrating model output with info from Round 2 Report:

•How "sensitive" is the system to stormwater inputs, relative to inputs of COIs from other sources?

•How "clean" does stormwater runoff need to be to avoid causing harborwide (water column) risk?

•Where does stormwater pose a risk for recontaminating sediment?

How will we use info?

•Identify areas/outfalls where more stormwater data is needed. Define data quality objectives and develop data collection plan.

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•Review and revise source control strategy and priorities as necessary.

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•Establish targets for evaluating adequacy of source control efforts and long term stormwater management tools (permits)

How reliable is the model output?

•Need to keep asking the question

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•Look for ways to verify model and/or alternative methods for evaluating stormwater impacts

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Commented [DLS6]: Not sure what info will be in Round 2 Comprehensive report that will answer the bullets below. It will give us the initial PRG targets – maybe it would be good to define what info you expect will help us answer these questions. Also, how does the more rigorous F&T model (that will be hybridized with the hydrodynamic model) next spring fit in?

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Commented [DLS7]: Is this where we discuss the hybridized F&T model?

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